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(54) Title: APPROACHES FOR ACHIEVING IMPROVED CAPACITY PLANS FOR A SATELLITE COMMUNICATIONS
SYSTEM VIA INTERLEAVED BEAMS FROM MULTIPLE SATELLITES

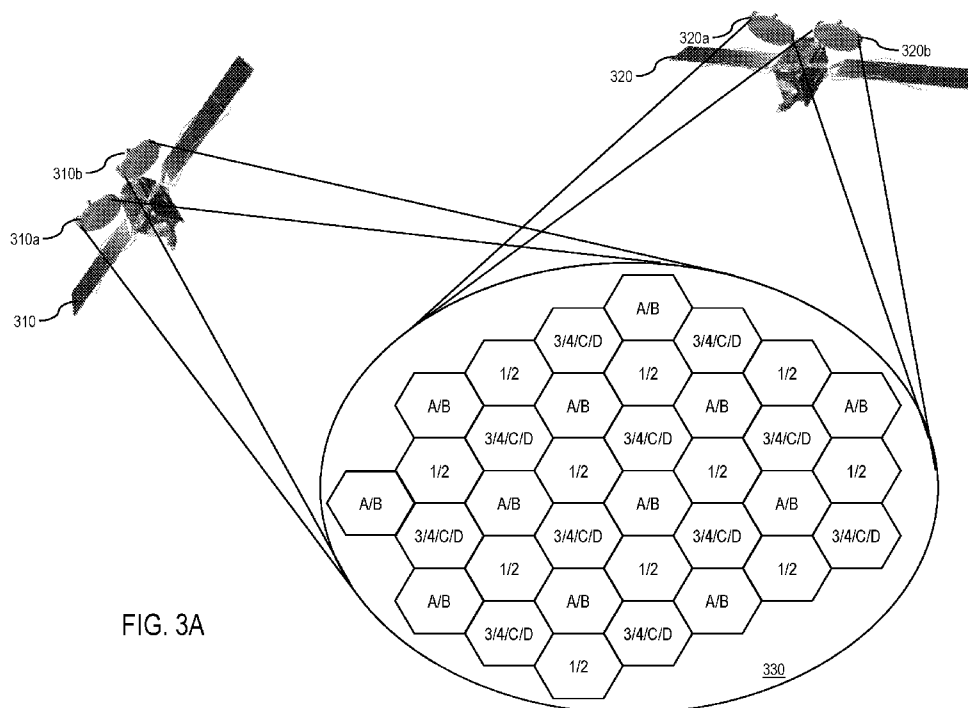


FIG. 3A

(57) Abstract: A method is provided for interleaving frequency reuse plans of multiple satellites to form an aggregate frequency reuse cell plan. A first plurality of spot beams is generated by a first satellite for a first frequency reuse plan based on radio frequency (RF) spectrum bands. A second plurality of spot beams is generated by a second satellite for a second frequency reuse plan based on the RF spectrum bands. The first and second plurality of spot beams are interleaved to generate an aggregate frequency reuse cell plan. According to the aggregate frequency reuse plan, each of a first plurality of cells is covered by a combination of at least two of the plurality of spot beams of the first satellite, and each of a first plurality of cells is covered by a combination of at least two of the plurality of spot beams of the second satellite.

SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR,
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A. CLASSIFICATION OF SUBJECT MATTER

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CPC - H04B 7/18567; H04B 7/18576; H04B 7/18578; H04B 7/2043; H04B 7/208

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

See Search History Document

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

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Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

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C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 2014/0295752 A1 (ViaSat, Inc.) 02 October 2014 (02.10.2014), para [0044]-[0045], [0048]-[0049], [0083].	1-8
A	US 2008/0233865 A1 (Malarky et al.) 25 September 2008 (25.09.2008), para [0140]-[0141].	1-8
A	US 7,382,743 B1 (Rao et al.) 03 June 2008 (03.06.2008), entire document.	1-8
A	US 2004/0192376 A1 (Grybos) 30 September 2004 (30.09.2004), entire document.	1-8
A	US 7,200,360 B1 (Chang et al.) 03 April 2007 (03.04.2007), entire document.	1-8
A	US 2011/0268017 A1 (Miller) 03 November 2011 (03.11.2011), entire document.	1-8
A	US 5,473,601 A (Rosen et al.) 05 December 1995 (05.12.1995), entire document.	1-8

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